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Yields of the Field Experiments 2003

Results of the
Classical
and other
Long-term Experiments

Full Table of Content

Rothumsted Research

03/R/CS/326 and 03/W/CS/326 - Amount of Straw

Rothamsted Research

Rothamsted Research (2004) 03/R/CS/326 and 03/W/CS/326 - Amount of Straw; Yields Of The Field Experiments 2003, pp 26 - 29 - DOI: https://doi.org/10.23637/ERADOC-1-260

03/R/CS/326 and 03/W/CS/326

AMOUNTS OF STRAW

```
Object: To study the effects of different amounts of straw, incorporated into
    the soil, on w. wheat - Rothamsted (R) Great Knott III, Woburn (W) Far
    Field I.
```

```
Sponsors: M.J. Glendining, P.C. Brookes.
```

The 16th year, w. wheat.

For previous years see 87-02/R & W/CS/326.

Design: 4 randomised blocks of 4 plots (R).
3 randomised blocks of 4 plots (W).

Whole plot dimensions: 3.0 x 13.5 (R). 0.004 ha

 $3.0 \times 14.5 (W)$.

Treatments:

STRAW Amounts of straw incorporated into the seedbed, cumulative to previous annual dressings:

		R	W
NONE	None	-	-
NORMAL	Normal	3.60	3.11
2 NORMAL	Twice normal	7.21	6.22
4 NORMAL	Four times normal	14.42	12.45

Experimental diary:

```
Great Knott III (R):
  14-Aug-02 : T :
                       : Straw treatments applied.
  18-Aug-02 : T :
                     : Chopped straw.
  17-Sep-02 : B :
                     : Ploughed 25 cm furrows.
                       : Combination drilled, Hereward, tr. Sibutol Secur, at
  18-Sep-02 : B :
                           200 seeds/m<sup>2</sup> with the Accord 2 drill.
                      : Crystal at 4.0 l in 200 l.
  24-Sep-02 : B :
  10-Mar-03 : B :
                       : Sulphur Gold at 167 kg.
                       : Sulphur Gold at 167 kg.
  10-Mar-03 : B :
  29-Apr-03 : B :
                      : 33.5% N at 448 kg.
                      : tm)Ally at 30 g in 200 l.
  07-May-03 : B :
                       : tm) Starane 2 at 0.75 1 in 200 1.
             : B :
  10-May-03 : B :
                      : tm)Opus at 0.5 1 in 200 1.
                      : tm) Amistar at 0.6 1 in 200 1.
             : B :
                      : tm)Opus at 0.5 1 in 200 1.
  28-May-03 : B :
                       : tm) Twist at 1.0 1 in 200 1.
             : B :
  04-Aug-03 : B :
                       : Combine harvested discards.
                      : Combine harvested plots for yield.
  06-Aug-03 : B :
                      : Straw weighed.
  07-Aug-03 : T :
             : B :
                       : Combine harvested discards.
```

03/R/CS/326 and 03/W/CS/326

Experimental diary:

```
Far Field I (W):
                          : Muriate of potash at 250 kg.
   16-Sep-02 : B :
   19-Sep-02 : B :
                         : CleanCrop Egret applied at 4.0 1 on 200 1.
   23-Sep-02 : T :
                        : Straw treatments applied.
                         : Ploughed 35 cm furrows.
   30-Sep-02 : B :
                         : Rolled.: Power harrowed.
               : B :
               : B :
                         : Drilled, Hereward, tr. Sibutol Secur at 350 seeds/m<sup>2</sup>
               : B :
                              with the Accord drill.
               : B :
                          : Rolled.
   26-Nov-02 : B :
                         : tm) Tolugan Extra at 5.0 l in 200 l.
                         : tm)Ardent at 1.0 1 in 200 1.
               : B :
                         : tm)Hallmark with Zeon Technology at 25 ml in 200 l. 
: Sulphur Gold 30% N, 7.6% S at 167 kg.
               : B :
   24-Mar-03 : B :
                         : tm) Topik at 125 ml in 200 l.
   26-Mar-03 : B :
                        : tm) Phase II at 1.0 l in 200 l.
               : B :
                        : Sulphur Gold 30% N, 7.6% S at 333 kg. : tm)Ally at 30 g in 200 l.
   02-May-03 : B : 07-May-03 : B :
               : B :
                         : tm)Starane 2 at 0.75 l in 200 l.
                        : tm)Unix at 0.4 kg in 200 l.
: tm)Acanto at 0.5 l in 200 l.
: Landmark at 0.75 l in 200 l.
               : B :
               : B :
   09-Jun-03 : B :
                         : Combine harvested plots for yield and discards
   09-Aug-03 : T :
                        : Sampled, baled and weighed straw.
   11-Aug-03 : T :
   19-Aug-03 : B :
                          : CleanCrop Egret at 4.0 l in 200 l.
   29-Aug-03 : B :
                          : Chopped straw.
```

 $\ensuremath{\mathtt{NOTE}}\xspace$: Grain and straw samples were taken for N analysis.

03/R/CS/326

GRAIN TONNES/HECTARE

```
**** Tables of means ****
```

STRAW

7.24 NONE NORMAL 7.26 7.11 2 NORMAL 7.14 4 NORMAL

> Mean 7.19

*** Standard errors of differences of means ***

STRAW

0.152

***** Stratum standard errors and coefficients of variation ****

Stratum

d.f.

s.e.

CV%

Blocks.Plots

9 0.215

3.0

GRAIN MEAN DM% 90.9

STRAW TONNES/HECTARE

**** Tables of means ****

STRAW

1.95 NONE 2.21 NORMAL 2 NORMAL 2.13 4 NORMAL 2.61

Mean

2.22

STRAW MEAN DM% 92.0

PLOT AREA HARVESTED 0.00284

03/W/CS/326

GRAIN TONNES/HECTARE

```
**** Tables of means ****
```

STRAW

NONE 6.29 NORMAL 6.25 2 NORMAL 6.22 4 NORMAL 6.23

Mean 6.25

*** Standard errors of differences of means ***

STRAW

0.079

***** Stratum standard errors and coefficients of variation *****

Stratum

d.f.

s.e.

CV8

Blocks.Plots

6

0.096

1.5

GRAIN MEAN DM% 91.2

STRAW TONNES/HECTARE

**** Tables of means ****

STRAW

NONE 2.27

NORMAL 2.00

2 NORMAL 2.48 4 NORMAL 2.14

Mean 2.22

STRAW MEAN DM% 93.9

PLOT AREA HARVESTED 0.00294